

Chesapeake Bay Preservation Act Work Program

Sugarland Run District Forum

September 9, 2010





Outline

- Background
- Water quality
- The Bay Act
- How it affects Loudoun property owners
- Anticipated outcomes



Background

- The Board of Supervisors has identified water quality protection as vital to the future of Loudoun County and have included it as one of the key components of their Strategic Plan.
- In 2001 the Board adopted the Revised General Plan, which included policies to protect the County's river and stream corridors in response to public concerns.
- The 2001 plan included a policy indicating that the County would consider adoption of the Chesapeake Bay Preservation Act.



Background

- In 2003, the Board adopted the River and Stream Corridor Zoning Overlay District (RSCOD) to protect our streams.
- RSCOD was a customized, Loudoun-based, approach to water quality protection.
- RSCOD was invalidated by the Circuit Court of Loudoun County in 2004 as a result of multiple lawsuits.
- Regulations associated with erosion and sediment control, stormwater management, floodplains, and scenic creek valley buffers remained in place.



Water Quality

- The Virginia Department of Environmental Quality (DEQ) monitors streams in Loudoun County for compliance with the Federal Clean Water Act.
- DEQ has identified stream segments that do not meet water quality standards in every watershed in the County.
- The number of stream impairments identified by DEQ continues to increase as more streams are assessed.
- Additional water quality protection tools are needed to address these impairments.

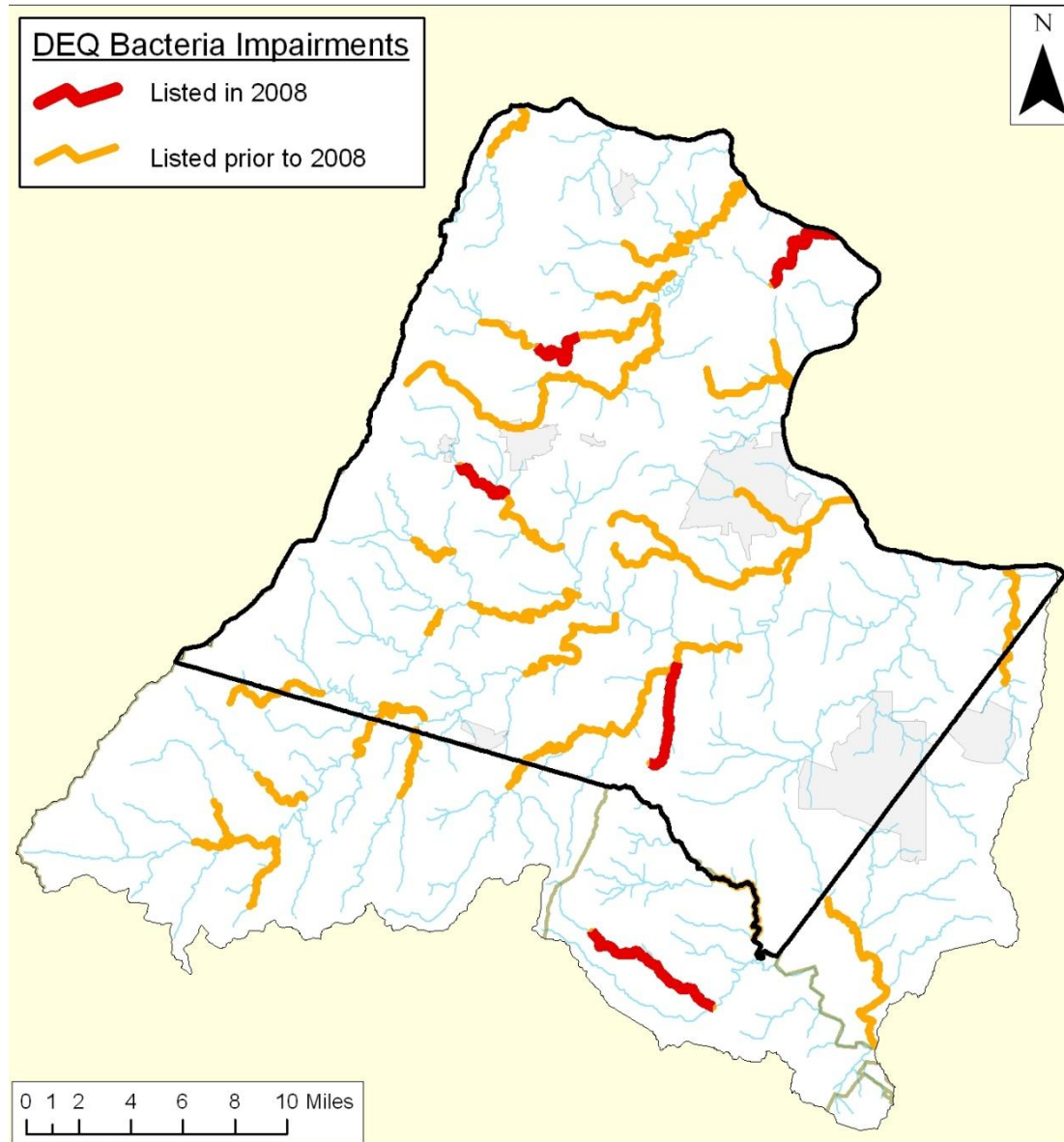


Water Quality Data

- DEQ has identified water quality impairments in Loudoun County for:
 - **recreational/swimming (bacteria)**
 - **aquatic life (benthic macroinvertebrates)**
 - **fishing/fish consumption (tissue analysis)**
- As of 2008, a total of 160 stream miles in Loudoun County were identified as impaired for one or more criteria (approximately 77% of all stream miles assessed).



Water Quality Data





Water Quality

- In 2009, DEQ sampled **12** locations in Loudoun and calculated VA SCI (aquatic insect) scores which ranged from severe stress to excellent.
- In 2009, the Loudoun County Stream Assessment sampled **200** locations and calculated VA SCI (aquatic insect) scores which ranged from severe stress to excellent.
- Countywide, the Loudoun County Stream Assessment found that statistically 78% of the stream miles are stressed or severely stressed, and would be considered impaired according to the Department of Environmental Quality's (DEQ) water quality standards.



Water Quality

- The Countywide Stream Assessment also evaluated water quality at 500 habitat sites.
- The habitat study revealed that 75% of the stream miles are suboptimal according to DEQ habitat assessment protocols.





The Bay Act

- April 7, 2009 - Board approved the Chesapeake Bay Preservation Act Work Program.
- The Bay Act is a state water quality protection regulation that is mandatory in 84 Tidewater localities, including Prince William and Fairfax, that drain to the Chesapeake Bay.
- Localities outside of Tidewater may adopt the Bay Act to protect the quality of local streams and water bodies.



Why the Bay Act?

- Successfully implemented by 84 Virginia localities for nearly 20 years.
- Clear enabling authority.
- Regional consistency.
- Technical assistance.
- Applies Countywide, with the exception of the Towns.
- Achieves our local water quality goals.



Nonpoint Source Pollution

- The Bay Act seeks to reduce the amount of nonpoint source pollution – e.g., sediment, nutrients (nitrogen/phosphorus), and bacteria – reaching local waterways through the implementation of pollutant control measures:
 - **Preservation of vegetated buffers adjacent to perennial streams,**
 - **Enhanced erosion and sediment control requirements,**
 - **Septic pump-out requirements**
- Nonpoint source pollution originates from agricultural, urban, and suburban areas – programs aimed at reducing these pollutants must be applied broadly.



Key Elements

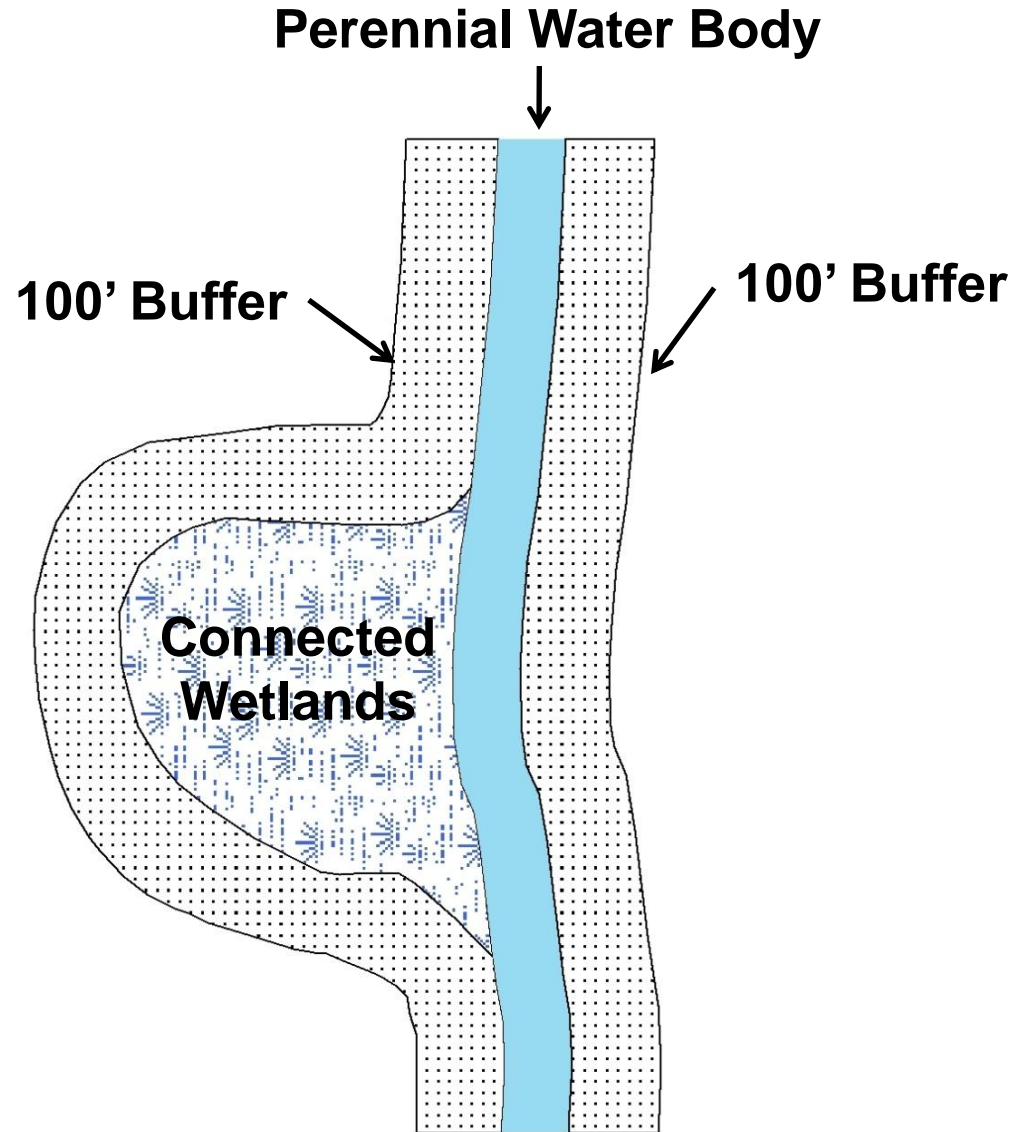
- Chesapeake Bay Preservation Area:

- **Resource Protection Area (RPA):**

Lands that are sensitive to impacts that may cause degradation of state waters.

100-foot buffer located adjacent to and landward of perennial water bodies and connected wetlands.

Resource Protection Area (RPA)





Benefits of Buffers

- Preservation and establishment of stream buffers is widely recognized as the most cost-effective and efficient means of preserving and improving water quality.
- The 100-foot RPA buffer slows runoff, prevents erosion, and filters nonpoint source pollution (removes 75% of sediment and 40% of nutrients).
- Wetlands and stream buffers also:
 - store and dissipate floodwaters,
 - provide habitat for a variety of plants and animals
 - provide shade and organic matter necessary to sustain aquatic habitat



Key Elements

- Chesapeake Bay Preservation Area:
 - **Resource Management Area (RMA):**
Lands outside the RPA that, if improperly used or developed, have the potential to cause significant water quality degradation or to diminish the functional value of the RPA.

All land outside of the RPA.

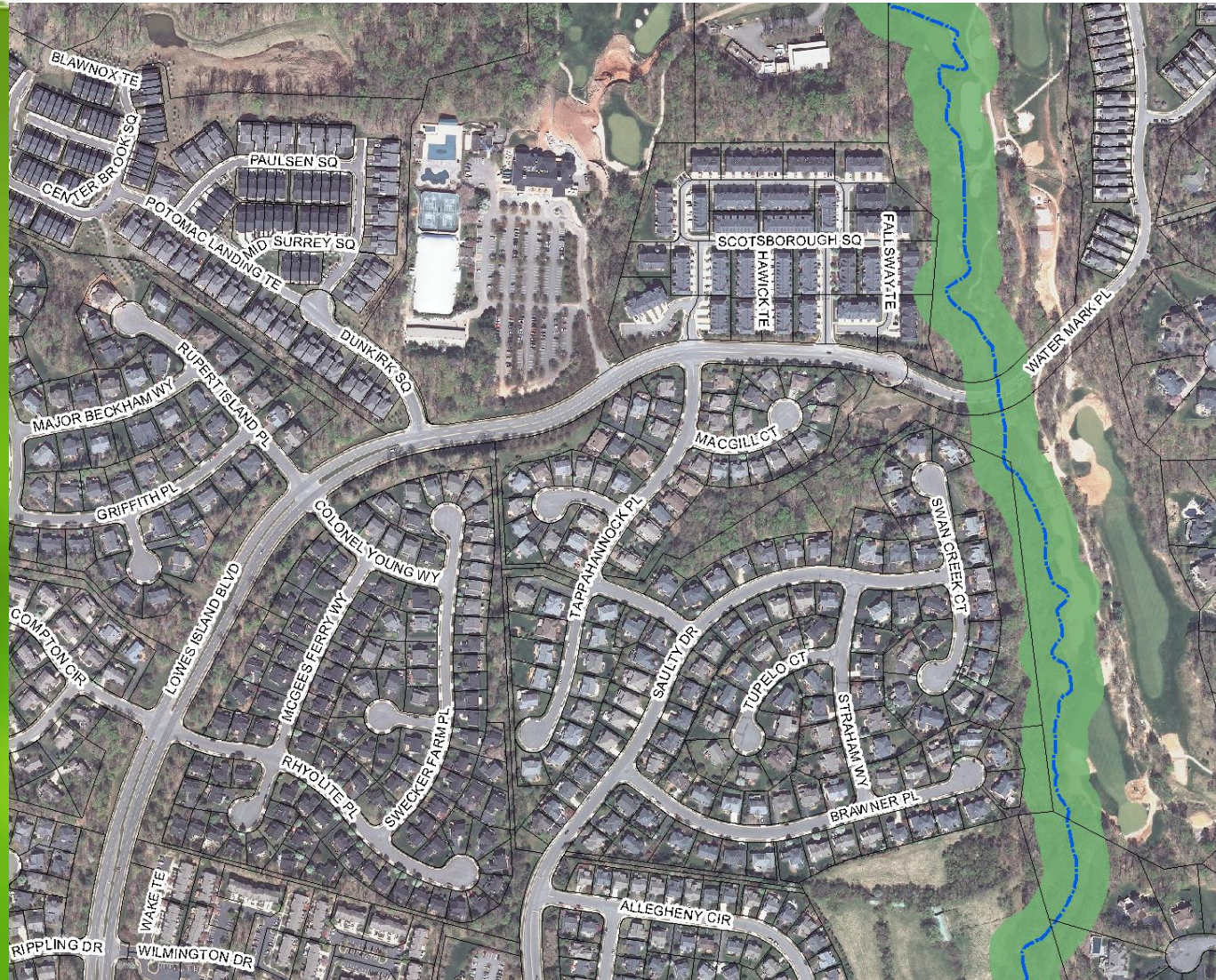
- *Note: The RPA and RMA do not apply in the Towns.*



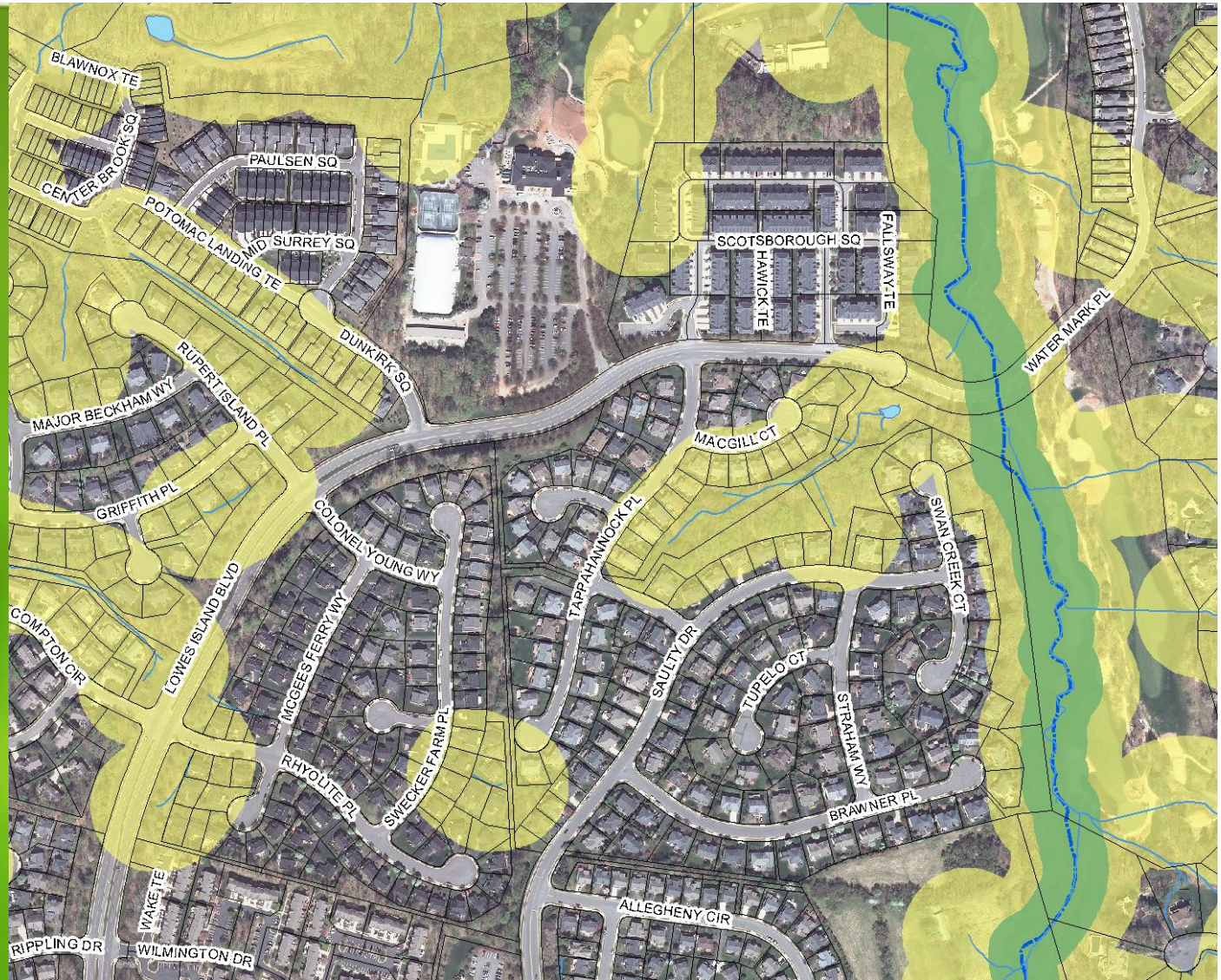
CBPA Map

- The CBPA map depicts the general extent of the RPA/RMA. It does not depict connected wetlands.
- The extent of the RPA is field-delineated in conjunction with development applications that propose land disturbing activity in excess of 2,500 square feet.
- The mapped RPA is based upon best available County perennial stream data and includes ~2/3 of perennial streams.
- The remaining ~1/3 of perennial streams fall within the area mapped as "RMA/Possible RPA" (yellow) on the "Draft RPA Screening Tool."

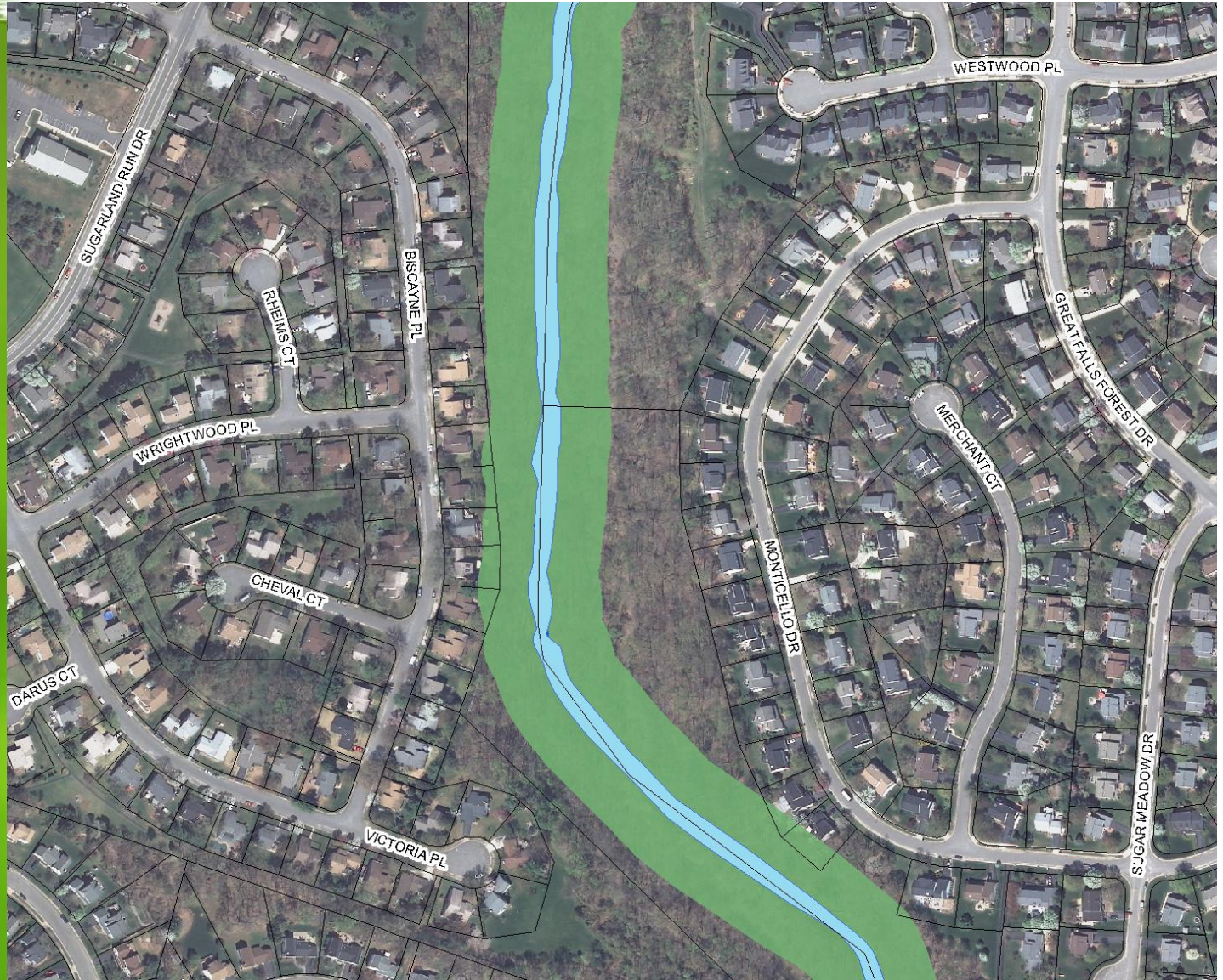
CBPA Map



RPA Screening Tool



CBPA Map

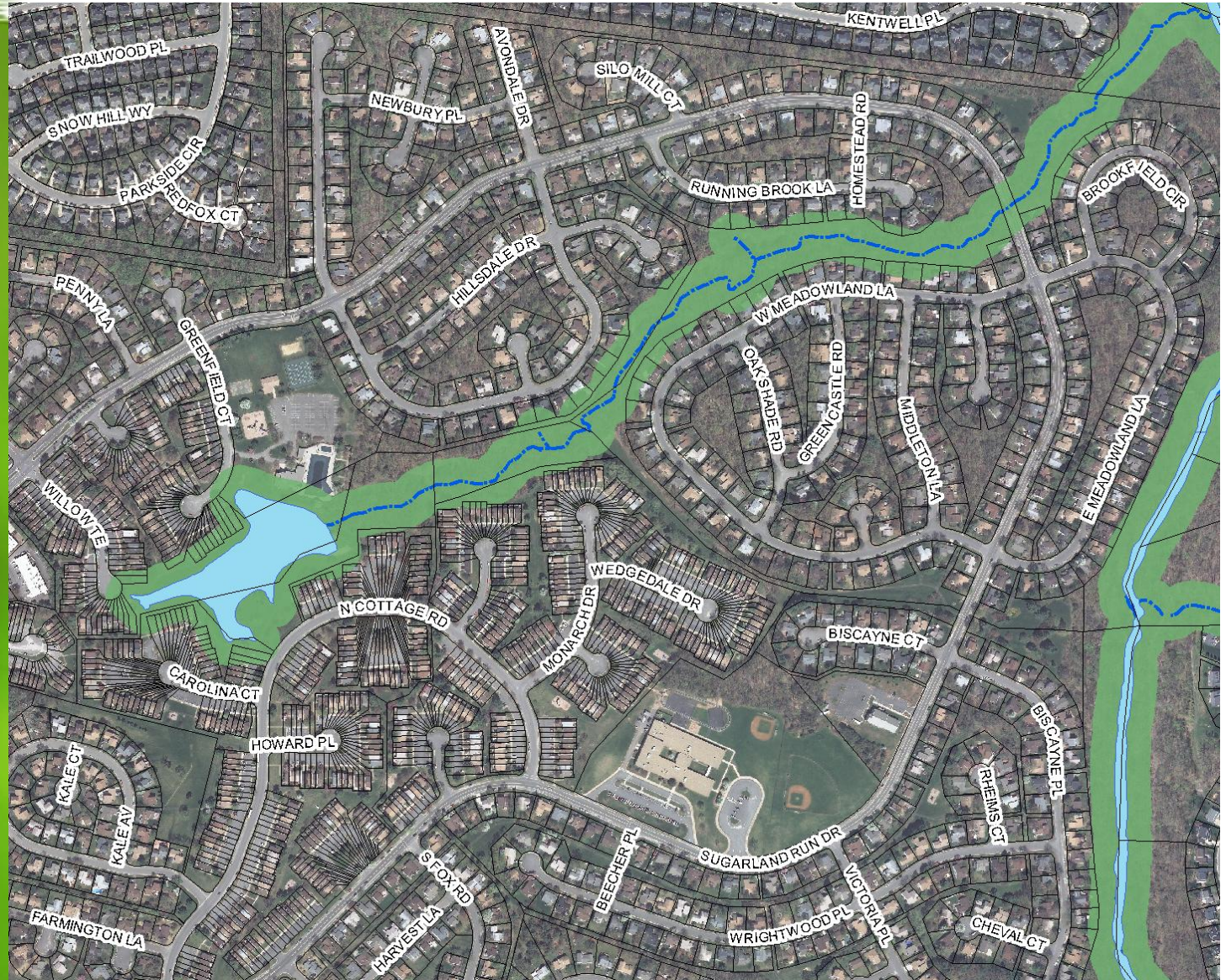




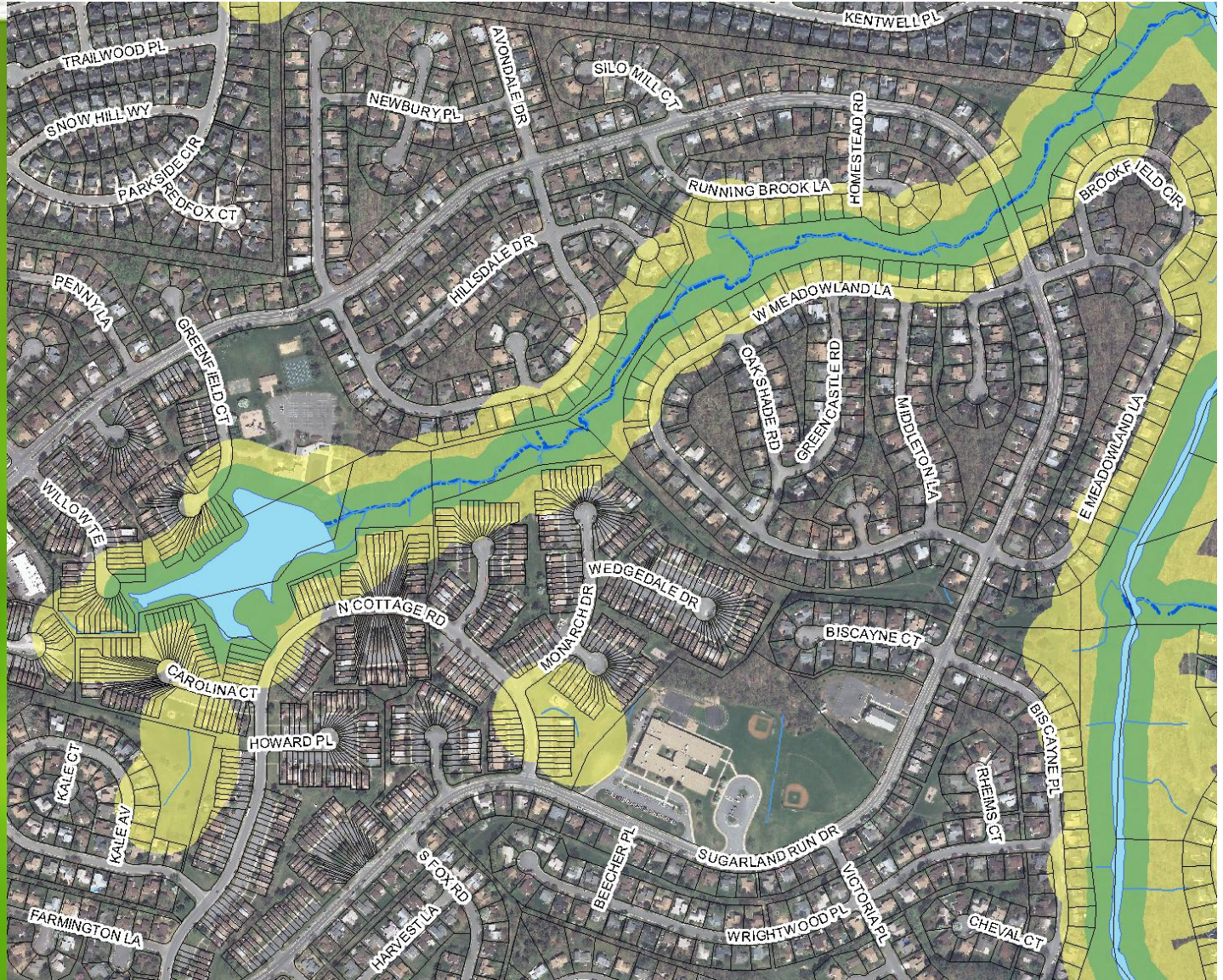
RPA Screening Tool



CBPA Map



RPA Screening Tool





RMA/Possible RPA

- Area identified as "RMA/Possible RPA" in the Screening Tool includes all land located within 200 feet of any drainage feature previously identified through aerial photography.
- Perenniality cannot be deciphered from aerial photography.
- It is recognized that many of the drainage features identified by the Screening Tool are drainage ditches or ephemeral or intermittent streams, or have subsequently been piped.
- As a result, staff estimates that approximately 20% of the drainage features located in the "RMA/Possible" RPA have the potential to be characterized as perennial.



RMA/Possible RPA

- The remaining perennial streams and connected wetlands will be identified by RPA delineations performed in conjunction with projects that disturb more than 2,500 square feet of land within the area identified as "RMA/Possible RPA" (yellow).
- An RPA delineation will only be required (in conjunction with projects that disturb more than 2,500 square feet) in cases where the stream has the potential to be classified as perennial pending further review.
- An RPA delineation will not be required in cases where the stream is clearly not perennial.



RPA, RMA/Possible RPA, RMA

- Generally speaking, the amendments are most restrictive in areas closest to perennial streams and water bodies (the RPA) and become less restrictive farther from perennial streams and water bodies (the RMA).
- Thus, there are different requirements for land designated RMA, RMA/Possible RPA, and RPA.
- There are also different requirements for projects that disturb $< 2,500$ sf of land and projects that disturb $> 2,500$ square feet of land.



Disturbances < & > 2,500 sf

- Disturbances <2,500 square feet (sf):
 - 14' x 20' deck = 280 sf
 - 15' x 15' patio = 225 sf
 - 20' x 20' sunroom = 400 sf
 - 24' x 24' garage = 576 sf
 - 20' x 40' pool = 800 sf
 - 20' x 50' barn = 1,000 sf
 - 12' x 14' shed = 168 sf
- Disturbances >2,500 sf:
 - House
 - Large pool with pool house
 - Large addition
 - Not likely on smaller urban and suburban lots

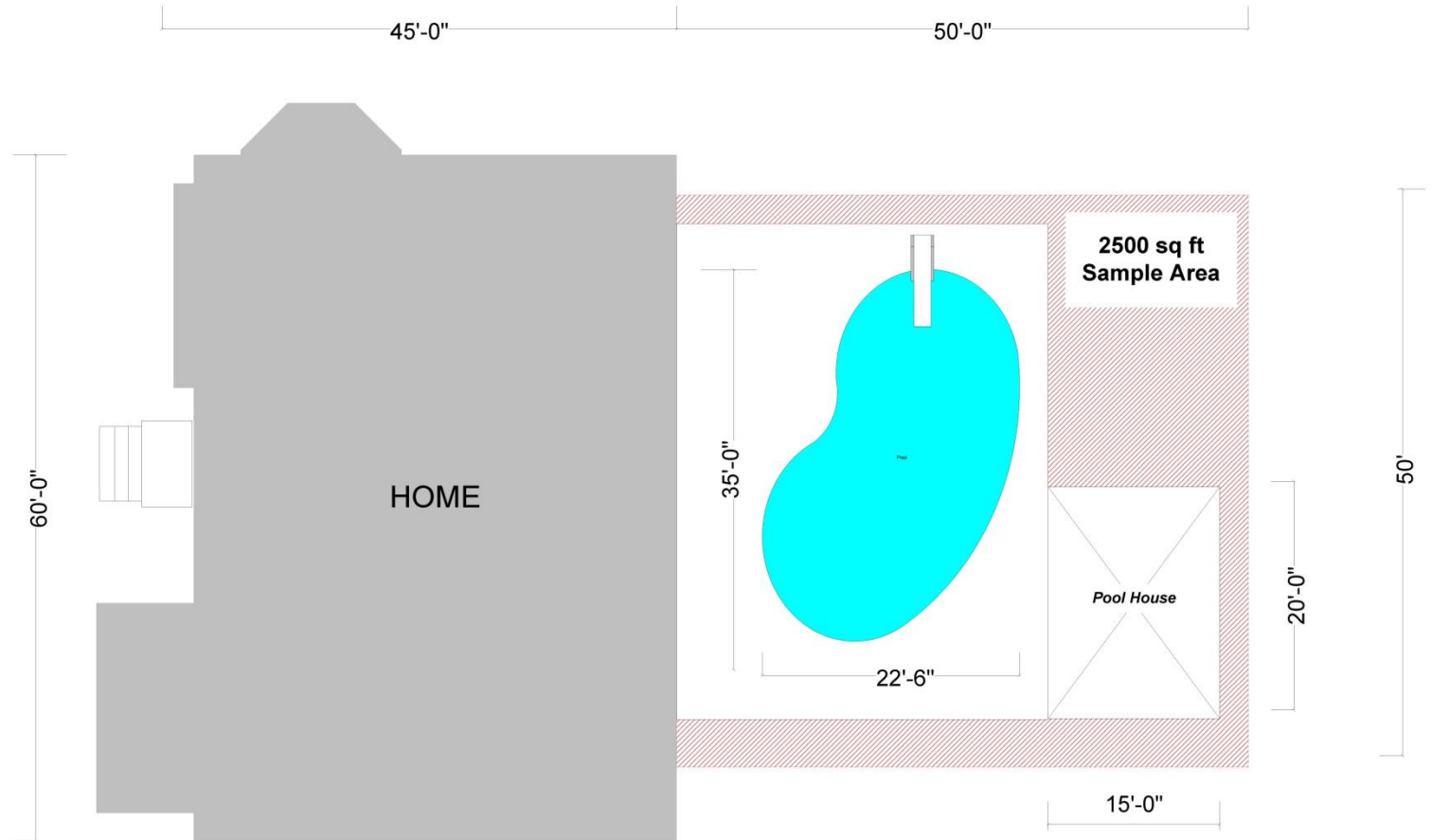


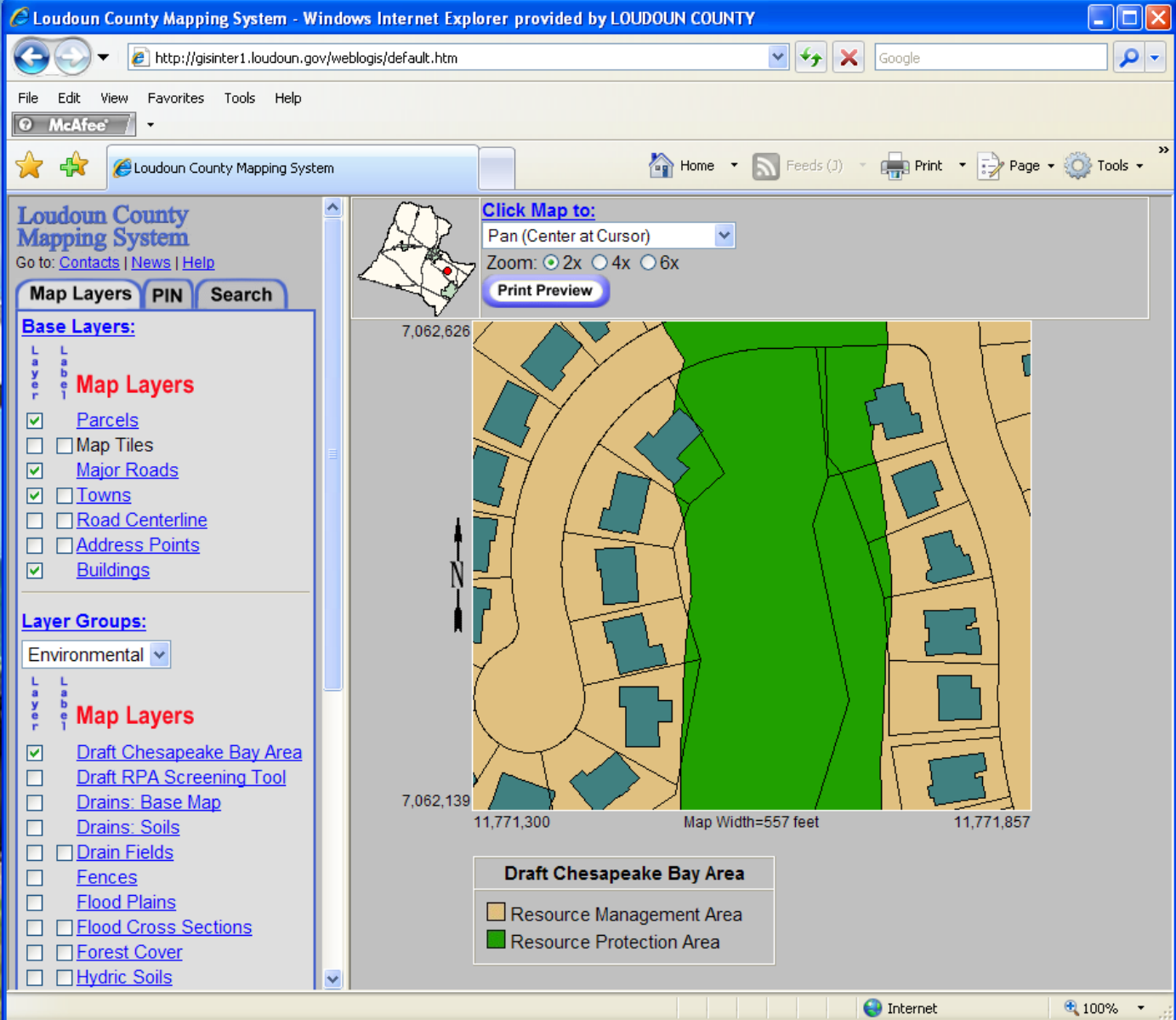
Disturbance $< 2,500$ sf





Disturbance < 2,500 sf

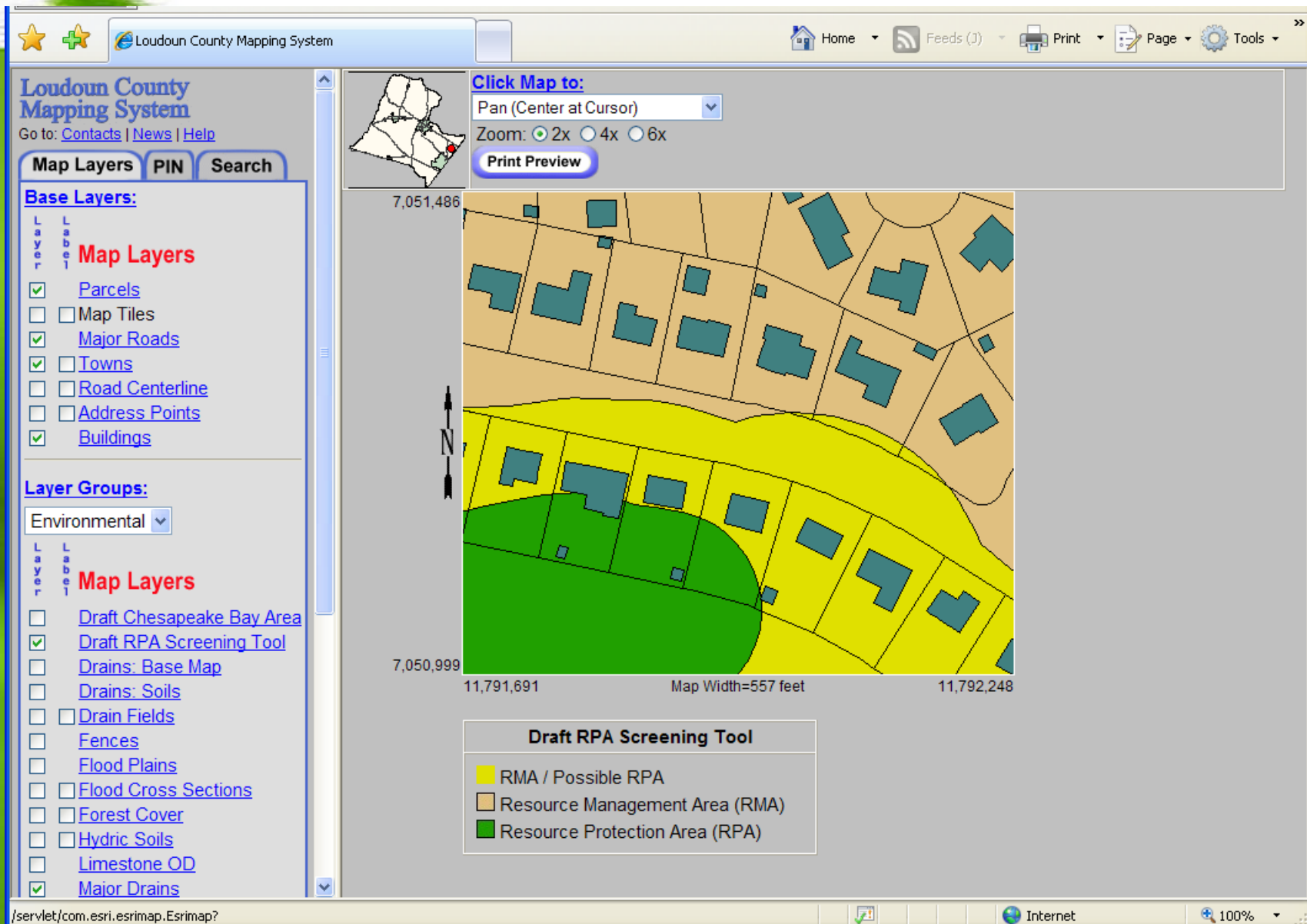






RMA (brown)

- Disturbances <2,500 sf:
 - If there is no RPA on the property, there are no additional requirements (*business as usual*).
 - If there is RPA on the property, a Locational Clearance is required to locate the improvement. If it is located outside the RPA, there are no additional requirements.
(*Requirements for improvements located within the RPA will be addressed later.*)
- Disturbances >2,500 sf:
 - A grading permit is required.





RMA/Possible RPA (yellow)

- Disturbances <2,500 sf:
 - (Same as RMA, as explained on the previous slide.)
- Disturbances >2,500 sf:
 - A grading permit is required.
 - An RPA delineation may be required in cases where further review indicates that the stream or water body has the potential to be perennial. The RPA delineation for a 1/4 to 1/2-acre property is estimated to cost between \$1,700 and \$3,900.



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Layer Groups:

Environmental 

Layer	Label
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Map Layers

- ☐ [Draft Chesapeake Bay Area](#)
- ☒ [Draft RPA Screening Tool](#)
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- ☐ [Limestone OD](#)
- ☒ [Major Drains](#)

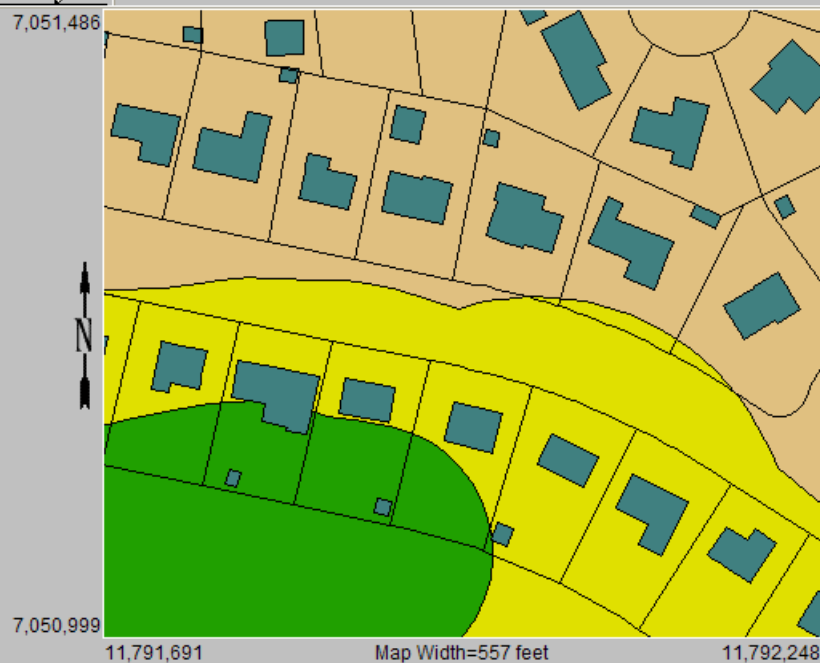


[Click Map to:](#)

Pan (Center at Cursor)

Zoom: ☒ 2x ☐ 4x ☐ 6x

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Draft RPA Screening Tool

- RMA / Possible RPA
- Resource Management Area (RMA)
- Resource Protection Area (RPA)



RPA (green)

- The landward 50-feet:
 - Attached structures (e.g., decks, additions) with a cumulative footprint up to 2,500 sf are eligible for an administrative waiver.
 - Attached structures with a cumulative footprint >2,500 sf and detached accessory structures (e.g., patio, gazebo, detached garage, shed) require an exception.
- Disturbances >2,500 sf and/or encroachments into the seaward 50-feet require an exception.



Waivers/Exceptions

- Administrative Waivers are processed by staff.
- RPA Exceptions require notice to landowners of property abutting and immediately across the street from the property and a public hearing before the Board-appointed Chesapeake Bay Review Board.
- The water quality functions of the buffer are directly related to the presence of filtering vegetation that retards runoff, prevents erosion, and filters nonpoint source pollution.
- Disturbances of the buffer impact the water quality protection functions of the buffer.



Waivers/Exceptions

- Waivers/Exceptions for disturbances <2,500 sf in the landward 50-feet:
 - Staff may perform the RPA delineation and the property owner can provide all other required materials without assistance from a consultant or engineer.
- Waivers/Exceptions for disturbances >2,500 sf and/or encroachments into the seaward 50-feet:
 - A consultant RPA delineation and tree cover inventory and an engineered plan are currently required (est. cost of \$3,200 - \$6,900 for ¼ to ½ acre lot).



Countywide RPA Statistics

- Based on the draft CBPA map, approximately:
 - 10% of parcels contain mapped RPA.
 - 44% of the mapped RPA falls within Major Floodplain.
 - 52,000 addressed structures.
 - 1,850 addressed structures are located in the mapped RPA and the first 25-feet adjacent to the RPA (3.5%).
 - 300 addressed structures are located in the seaward 50-feet of the RPA (0.5%).
 - 96% of addressed structures are located outside the mapped RPA.



Sugarland Run RPA Statistics

- Based on the draft CBPA map, approximately:
 - 5,360 addressed structures.
 - 140 are located within the mapped RPA (2.6% within the RPA, 97.4% outside the RPA).
 - 200 are located within the mapped RPA and the first 25-feet adjacent to the RPA (3.7%).



Permitted Uses in the RPA

- Existing lawns may be maintained, but may not be expanded.
- The buffer is not required to be planted unless the property is developed (e.g., subdivided). Some mitigation plantings may also be required in conjunction with waiver/exception requests associated with proposed improvements in the RPA.



Permitted Uses in the RPA

- Fences that do not inhibit or alter surface flow may be installed, provided that only vegetation necessary for the placement of the fence is removed and replacement vegetation is provided.
- Dead, diseased, dying, or storm-damaged trees or shrubbery and noxious weeds may be removed without County approval, provided that replacement vegetation is provided.
- County approval is required for removal of vegetation to establish sight lines/vistas, access paths, and shoreline erosion control projects.



Septic/Ag Requirements

- Septic systems must be pumped out at least once every five years. (The Loudoun County Health Department recommends a pump-out every 3-5 years for routine maintenance.)
- The average cost for the septic pump-out is \$218 (or \$44 per year).
- The cost to repair or replace a failed system is greater.
- The ordinance also includes agricultural requirements intended to preserve the function of the RPA.



Fiscal Impacts

- Neighboring jurisdictions found no significant impacts on fair market values as a result of the Bay Act.
- The draft amendments will be implemented by existing staff in conjunction with the County's existing grading and development review process.
- Enforcement will occur via the same complaint-based system currently in place for violations of other County ordinances.



Goals/Outcomes

- Implement the best available tools to protect and improve local water quality.
- Preserve and enhance existing riparian buffers.
- Preserve wetlands.
- Reduce the trend of additional stream impairments.
- Reassess water quality by performing another Countywide Stream Assessment in five years.
- Develop subwatershed plans.



Additional Information

- Additional information, including Frequently Asked Questions (FAQs), is available:
 - on the Chesapeake Bay website at www.loudoun.gov/chesapeakebay
 - Chesapeake Bay Hotline at (703) 777-0655,
 - ChesBay@loudoun.gov







Mapping Your Property

- www.loudoun.gov/weblogis



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| <input checked="" type="checkbox"/> | Major Roads |
| <input checked="" type="checkbox"/> | Towns |
| <input type="checkbox"/> | Road Centerline |
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Layer Groups:

Land Records

- | Layer | Label |
|--------------------------|------------------------------------|
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| <input type="checkbox"/> | Comp Plan Overlays |
| <input type="checkbox"/> | Leesburg Zoning |
| <input type="checkbox"/> | Planned Use |
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| <input type="checkbox"/> | Road Casings |
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Apply



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7,166,000

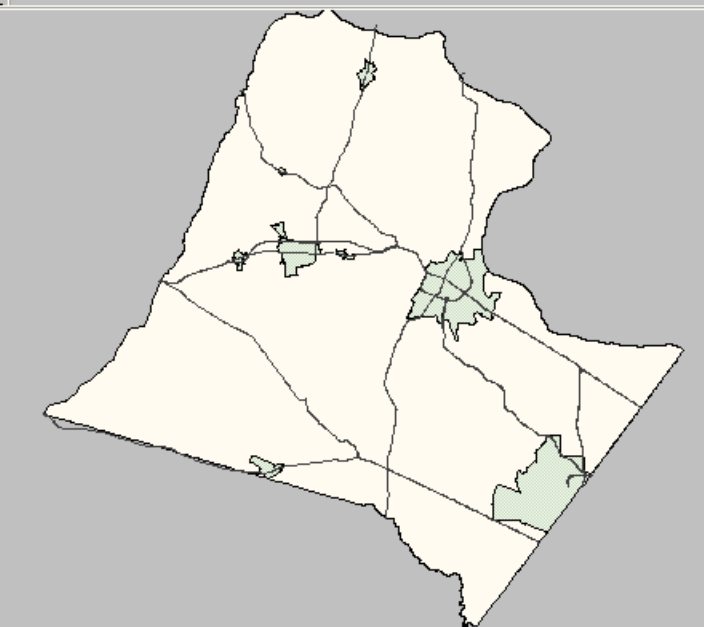


6,990,000

11,623,388

Map Width=201,207 feet

11,824,596





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7,166,000



6,990,000

11,623,388

Map Width=201,207 feet

11,824,596

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Year:

2010

Property Address:

17535

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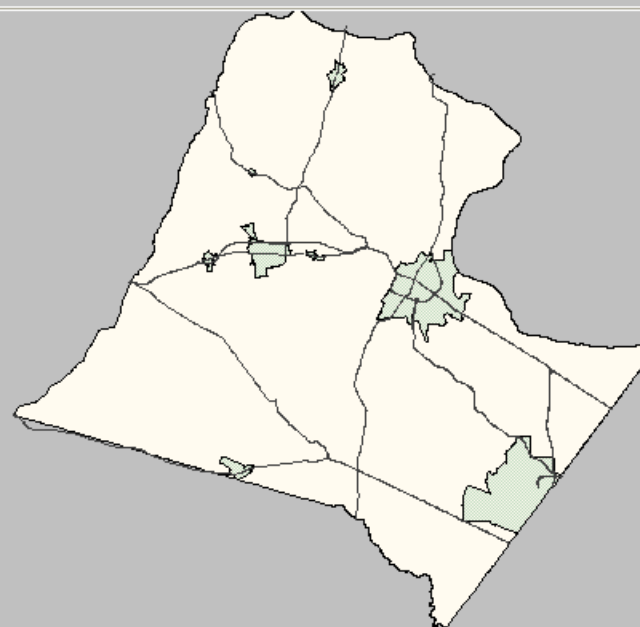
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6,990,000

11,623,388

Map Width=201,207 feet

11,824,596



Real Estate Tax, Assessment & Parcel Database - Windows Internet Explorer provided by LOUDOUN COUNTY


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WARNING: Any parcels that were divided or combined within the last 36 months should be investigated by the purchaser to ensure that all taxes and levies are paid.

The parcel history should be reviewed to determine if the property received land use valuation and deferral. If the parcel did, it may be subject to levy of deferred taxes. For information go to www.loudoun.gov/assessor or call 703-777-0267.

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Results for Year 2010 17535 - 3 Parcels Found

Tax Map No. PIN	Map	Taxes	Owner Name	Address
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<input type="checkbox"/>	Road Centerline	
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Layer Groups:

Environmental ▾

Layer	Label	
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<input type="checkbox"/>	Draft RPA Screening Tool	
<input type="checkbox"/>	Drains: Base Map	
<input type="checkbox"/>	Drains: Soils	
<input type="checkbox"/>	Drain Fields	
<input type="checkbox"/>	Fences	
<input type="checkbox"/>	Flood Plains	
<input type="checkbox"/>	Flood Cross Sections	
<input type="checkbox"/>	Forest Cover	
<input type="checkbox"/>	Hydric Soils	
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<input checked="" type="checkbox"/>	Major Drains	
<input type="checkbox"/>	1993 Mountain Side	

Click Map to:
County Map ▾

Zoom: ☒ 2x ☐ 4x ☐ 6x

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7,052,268

7,052,114

11,798,438

11,798,614

Map Width=176 feet

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Layer Groups:

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- Layer 2
- Map Layers**
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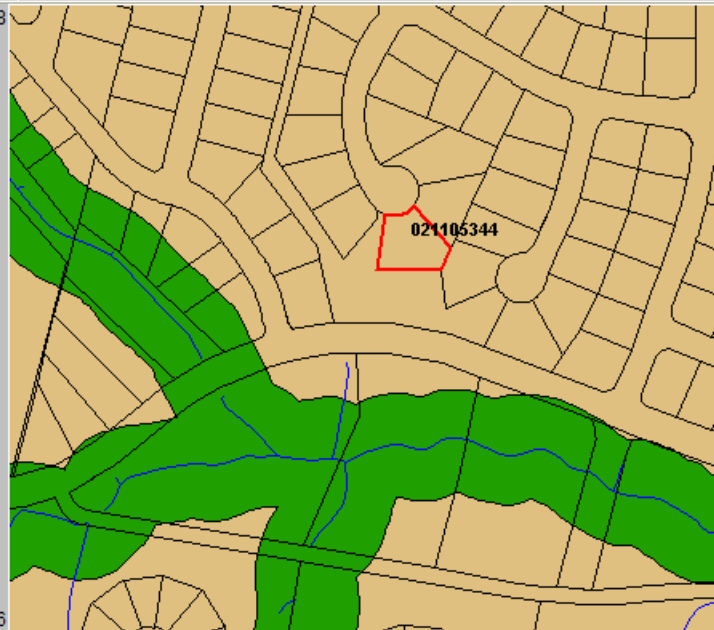
Pan (Center at Cursor)

Zoom: ☒ 2x ☐ 4x ☐ 6x

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7,052,648

7,051,416



11,797,731

Map Width=1,408 feet

11,799,140

Draft Chesapeake Bay Area

- ☐ Resource Management Area
- ☒ Resource Protection Area

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- Layer 1 **Map Layers**
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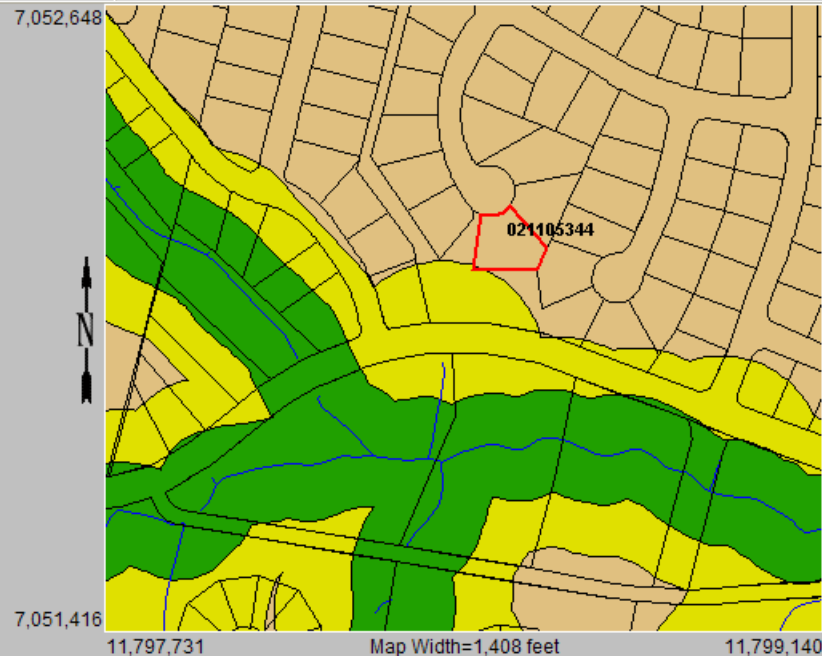


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Draft RPA Screening Tool

- ☒ RMA / Possible RPA
- ☐ Resource Management Area (RMA)
- ☒ Resource Protection Area (RPA)